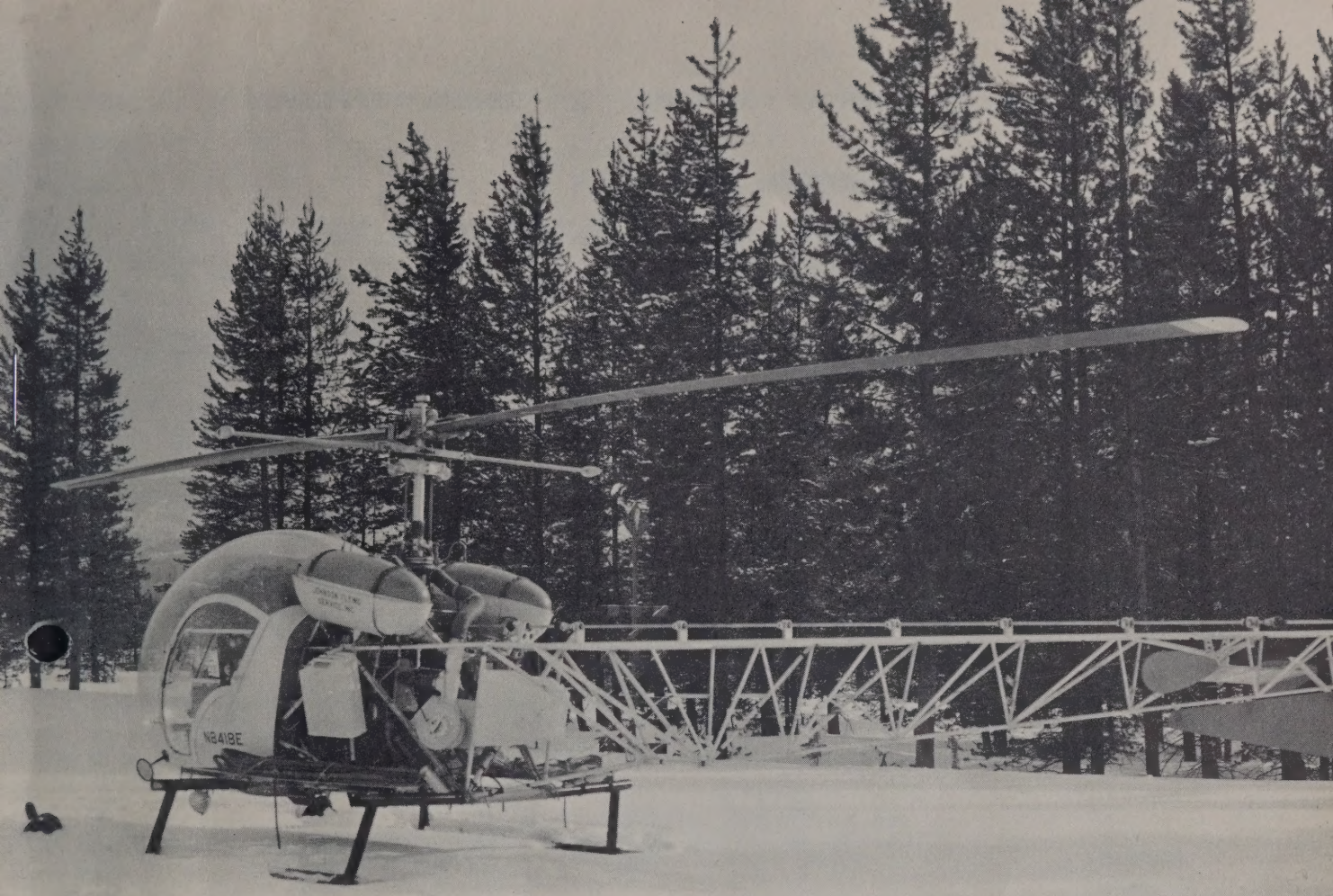

WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
MONTANA

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE.
and
MONTANA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with Federal, State, and private organizations listed on the inside back cover of this report.

MAY 15, JUNE 1, 1965
and
SPECIAL MEASUREMENTS

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Soil Conservation Service, 511 N.W. Broadway - Room 507, Portland, Oregon 97209.

PUBLISHED BY SOIL CONSERVATION SERVICE

REPORTS	ISSUED	LOCATION	COOPERATING WITH
RIVER BASINS			
WESTERN UNITED STATES	MONTHLY (FEB.-MAY)	PORTLAND, OREGON	ALL COOPERATORS
BASIC DATA SUMMARY	OCTOBER 1	PORTLAND, OREGON	ALL COOPERATORS
STATES			
ALASKA	MONTHLY (MAR.-MAY)	PALMER, ALASKA	ALASKA S.C.D.
ARIZONA	SEMI-MONTHLY (JAN.15 - APR.1)	PHOENIX, ARIZONA	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO	MONTHLY (FEB.-MAY)	FORT COLLINS, COLORADO	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO	MONTHLY (JAN.-JUNE)	BOISE, IDAHO	IDAHO STATE RECLAMATION ENGINEER
MONTANA	MONTHLY (JAN.-JUNE)	BOZEMAN, MONTANA	MONT. AGR. EXP. STATION
NEVADA	MONTHLY (JAN.-MAY)	RENO, NEVADA	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES DIVISION OF WATER RESOURCES
OREGON	MONTHLY (JAN.-JUNE)	PORTLAND, OREGON	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	MONTHLY (JAN.-JUNE)	SALT LAKE CITY, UTAH	UTAH STATE ENGINEER
WASHINGTON	MONTHLY (FEB.-JUNE)	SPOKANE, WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	MONTHLY (FEB.-JUNE)	CASPER, WYOMING	WYOMING STATE ENGINEER

PUBLISHED BY OTHER AGENCIES

REPORTS	ISSUED	AGENCY
BRITISH COLUMBIA	MONTHLY (FEB.-JUNE)	WATER RESOURCES SERVICE, DEPT. OF LANDS, FOREST AND WATER RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA	MONTHLY (FEB.-MAY)	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.

USDA SCS PORTLAND OREG 1964

WATER SUPPLY OUTLOOK

FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

for

MONTANA

Report Prepared

By

Phillip E. Farnes
Snow Survey Supervisor

And

Stanley E. Cook
Assistant Snow Survey Supervisor

Snow Survey and Water Supply Forecasting Branch
Soil Conservation Service
Box 855
Bozeman, Montana

Issued By

H. D. Hurd
State Conservationist
Soil Conservation Service
Bozeman, Montana

J. A. Asleson, Director
Montana Agricultural
Experiment Station
Bozeman, Montana

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MONTANA
WATER SUPPLY OUTLOOK
as of
June 1, 1965

The water supply remains good to excellent and the outlook for irrigation water supplies has improved during the past month. Delayed snowmelt coupled with an above average snow pack on May 1 has resulted in an above average June 1 snow pack. The high elevation snow pack in the southwest portion of the state presently contains the maximum of water for this season. This is probably the most water that has been stored in the snow this late in the year.

June 15 surveys are planned for some snow courses. In other areas of the state, high elevation snow pack is well above average.

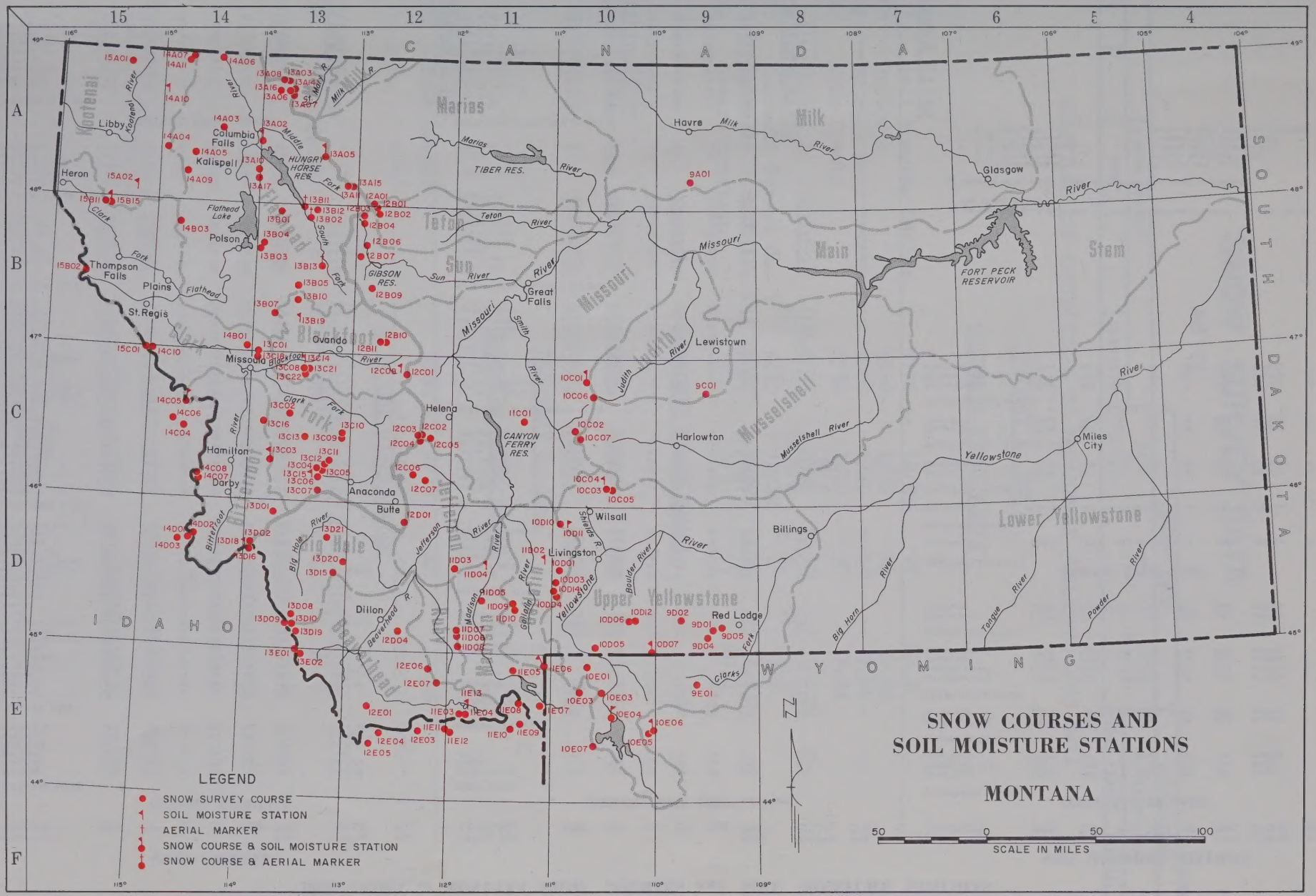
Runoff during May was below average in the Kootenai, near average in the Flathead and Bitterroot, and above average in the Upper Clark Fork. Below the junction of the Flathead, runoff from the Clark Fork was a little above average.

During May, runoff was a little above average in the Missouri headwaters and slightly below average on streams tributary to the main stem of the Missouri. Runoff was below average in the Yellowstone drainage.

Runoff during the remainder of the season will be quite high, percentagewise, particularly in the Missouri and Yellowstone headwaters and snowfed streams in central Montana. In these areas the snow line is quite low, and heavy, warm rains during the first 15 days in June may cause flooding. Evenly spaced warm and cool periods with deficient precipitation, or precipitation that falls as snow at higher elevations, will permit a gradual melt of the heavy snow pack.

Major reservoirs have storage available to help control runoff and reduce peak flows. Spillways on many small reservoirs now presently full will probably be used often during the next month.

Soil moisture is generally near field capacity.


SNOW COURSES AND
SOIL MOISTURE STATIONS
MONTANA
LEGEND
SNOW SURVEY COURSE
SOIL MOISTURE STATION
AERIAL MARKER
SNOW COURSE & SOIL MOISTURE STATION
SNOW COURSE & AERIAL MARKER
SCALE IN MILES
50 0 50 100
CANADA
IDAHO
WYOMING
SOUTH DAKOTA
Libby
Columbia Falls
Kalispell
Heron
Polson
Thompson Falls
Plains
St. Regis
Missoula
Hamilton
Darby
Anaconda
Butte
Dillon
Helena
Ovando
Great Falls
Havre
Lewistown
Glasgow
Harlowton
Wilsall
Livingston
Billings
Red Lodge
Miles City
FORT PECK RESERVOIR
TIBER RES.
GIBSON RES.
CANYON FERRY RES.
HUNGRY HORSE RES.
Flathead Lake
Kootenai River
Flathead River
Clark Fork
Bitterroot River
Big Hole River
Blackfoot River
Middle Fork
South Fork
Marias River
Milk River
Teton River
Sun River
Missouri River
Smith River
Judith River
Musselshell River
Yellowstone River
Boulder River
Shields R.
Jefferson River
Madison River
Gallatin River
Beaverhead R.
Big Horn River
Tongue River
Powder River
Clarks Fork
Lower Yellowstone
Upper Yellowstone
Marias
Milk
Teton
Sun
Missouri
Main Stem
Blackfoot
Big Hole
Big Wall
Beaverhead
Musselshell
Lower Yellowstone
Upper Yellowstone

1965 INDEX to MONTANA SNOW COURSES and SOIL MOISTURE STATIONS

SNOW COURSES

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
COLUMBIA RIVER BASIN								
KOOTENAI RIVER								
Baree Creek	15B11	5500	36	26N	31W	1956	3,4,5,5½	2
Baree Trail	15B15	3800	5	25N	30W	1965	3,4,5,5½	2
Brush Creek	14A04	5000	12	30N	26W	1937	3,4,5	1,2
Graves Creek	14A11	4300	1	36N	25W	1965	3,4,5,5½	1,2
Red Mountain	15A01	6000	4	36N	29W	1937	3,4,5,5½,6	1,2
Wessel Divide	14A07	5450	20	37N	24W	1937	3,4,5,5½,6	1,2
FLATHEAD RIVER								
Bassoo Peak	14B03	5150	11	24N	25W	1961	3,4,5	1,5
Beaver Lake	13A11	5900	31	28N	11W	1964	3,4,5	1
Big Creek	13B03	6750	7	22N	18W	1941	3,4,5, 6	1,5
Camp Misery	13A17	6400	30	28N	18W	1962	3,4,5	1,2
Desert Mountain	13A02	5600	24	31N	19W	1937	1,2,3,4,5, 6	1,2
Fatty Creek	13B04	5500	8	22N	18W	1962	3,4,5, 6	1,5
Griffin Creek Divide	14A09	5150	11	28N	25W	1960	3,4,5	1,5
Gunsight Lake	13B12	6300	35	26N	14W	1964	3,4,5	1
Hell Roaring Divide	14A03	5770	35	32N	22W	1942	1,2,3,4,5,5½,6	2
Holbrook	13B13	4530	18	21N	13W	1951	1,2,3,4,5	1
Kishenehn	14A06	3890	14	37N	22W	1954	3,4	6
Logan Creek	14A05	4300	34	30N	24W	1937	3,4,5	1,2
Marias Pass	13A05	5250	34	30N	14W	1934	1,2,3,4,5	3
Mineral Creek	13A16	4000	29	35N	17W	1957	3,4,5	6
North Fork Jocko	13B07	6300	3	17N	17W	1941	3,4,5,5½,6	1,5
Spotted Bear Mountain	13B02	7000	23	25N	15W	1948	1,2,3,4,5	1,2
Strawberry Lake	13A10	5600	11	28N	19W	1948	3,4,5	1
Trinkus Lake	13B01	6100	9	25N	17W	1948	3,4,5	1
Twin Creeks	13B11	3580	24	26N	16W	1951	1,2,3,4,5	1,2
Upper Holland Lake	13B05	7000	28	20N	15W	1948	3,4,5	1
CLARK FORK RIVER								
Black Pine	13C13	7100	26	8N	15W	1959	3,4,5	1,2
Copper Creek	12B10	5700	1	15N	9W	1962	3,4,5	1,2
Cotter Mine	12B11	6250	2	15N	9W	1962	3,4,5	1,2
Coyote Hill	13B10	4200	12	18N	16W	1947	1,2,3,4,5	1,2
El Dorado Mine	13C09	7800	23	8N	12W	1949	3,4	1
Fred Burr Pass	13C11	8000	12	6N	13W	1957	3,4,5	1
Gold Creek Lake	13C10	7200	14	8N	12W	1949	3,4	1
Heart Lake Trail	14C10	4800	11	14N	27W	1965	3,4,5	1,2
Hoodoo Creek	15C01	5900	16	14N	27W	1937	3,4,5	1,2
Intergaard	13C04	6450	6	5N	13W	1936	2,3,4,5	4
Lubrecht Forest No. 3	13C21	5450	19	13N	14W	1951	1,2,3,4,5	8
Lubrecht Forest No. 4	13C22	4650	23	13N	15W	1951	1,2,3,4,5	8
Lubrecht Forest No. 6	13C08	4040	11	13N	15W	1951	1,2,3,4,5	8
Red Lion	13C12	7100	22	6N	13W	1958	3,4,5	1
Skalkaho Summit	13C03	7260	30	6N	17W	1937	3,4,5,5½,6	1
Slide Rock Mountain	13C02	7100	35	10N	16W	1937	3,4,5	1
Southern Cross	13C05	6500	8	5N	13W	1936	2,3,4	4
Spring Gulch	13C18	6000	12	14N	19W	1961	1,2,3,4,5	8
Storm Lake	13C07	7780	19	4N	13W	1939	1,2,3,4,5	1
Stuart Mill	13C06	6500	19	5N	13W	1936	2,3,4	4
Stuart Mountain	13C01	7400	6	14N	18W	1936	1,2,3,4,5, ,6	8
TV Mountain	14B01	6800	33	15N	19W	1956	1,2,3,4,5	8
BITTERROOT RIVER								
Ambrose	13C16	6480	28	9N	18W	1960	3,4,5	1
East Fork R. S.	13D01	5400	16	2N	17W	1937	3,4	1
Gibbons Pass	13D02	7100	4	2S	19W	1934	1,2,3,4,5,5½,6	1,3
Lost Horse	14C07	5940	5	4N	23W	1960	3,4,5	1
Nez Perce Camp	14D02	5680	19	1S	23W	1937	3,4,5	1
Nez Perce Pass	14D01	6570	25	1S	24W	1937	3,4,5	1
Twin Lakes	14C08	6510	32	5N	23W	1960	3,4,5	1
ST. MARY RIVER BASIN								
Iceberg Lake No. 3	13A03	5600	1	35N	17W	1922	5	3,9
Josephine Lower No. 9	13A14	4900	22	35N	16W	1955	5	3,9
Mount Allen No. 7	13A07	5700	27	35N	16W	1922	5	3,9
Piegan Pass No. 6	13A06	5500	27	35N	16W	1922	5	3,9
Ptarmigan No. 8	13A08	5800	36	36N	17W	1937	5	3,9
MISSOURI RIVER BASIN								
BEAVERHEAD RIVER								
Bloody Dick	13D10	7600	12	8S	16W	1948	3,4,5	1
Carter Creek	12D04	7400	22	8S	7W	1963	3,4	1
Elkhorn Springs	13D15	7800	21	4S	12W	1935	3,4,5	3
Gold Stone	13D09	8100	11	8S	16W	1948	3,4,5	1
Lakeview Canyon	11E04	6930	26	14S	2W	1948	3,4,5	10
Lakeview Ridge	11E03	7400	27	14S	2W	1948	3,4,5	10
Leshi Pass	13E01	7480	9	10S	15W	1948	3,4	1
Trail Creek	13E02	7090	15	10S	15W	1948	3,4	1
White Pine Ridge	12E01	8850	18	14S	9W	1948	3,4,5	1

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
MISSOURI RIVER BASIN (continued)								
RUBY RIVER								
Clover Meadow	11D08	8600	28	9S	2W	1963	3,4,5	1
Divide	12E07	7900	14	12S	4W	1963	3,4,5	1
Notch	12E06	8500	18	11S	4W	1963	3,4,5	1
BIG HOLE RIVER								
Abundance Lake	13D20	8800	7	3S	11W	1963	3,4,5	1
Darkhorse Lake	13D19	8600	4	8S	16W	1963	3,4,5	1
Foolhen	13D21	8500	11	1S	13W	1963	3,4,5	1
Jahnke Creek	13D08	7340	25	7S	16W	1948	3,4,5	1
JEFFERSON RIVER								
Berry Meadow	12C07	7300	8	5N	5W	1962	3,4,5	1
Picnic Grounds	12C06	6500	10	5N	6W	1941	2,3,4	4
Pipestone Pass	12D01	7200	10	1N	7W	1938	1,2,3,4,5	1
MADISON RIVER								
Call Road	11D07	8050	21	8S	2W	1962	3,4,5	1
Crockett Lake	11D06	8400	20	8S	2W	1962	3,4,5	1
Hebgen Dam	11E05	6550	22	11S	3E	1934	1,2,3,4,5	3
Jack Creek	11D05	6800	13	6S	1E	1941	3,4	1
North Meadow	11D03	7500	23	3S	3W	1941	3,4	1
West Yellowstone	11E07	6700	34	13S	5E	1934	1,2,3,4,5	3
GALLATIN RIVER								
Arch Falls	10D14	7350	3	5S	6E	1963	2,3,4,5,5½	1
Bear Basin	11D09	8150	9	6S	3E	1963	3,4,5	1
Devil's Slide	10D04	8100	14	5S	6E	1935	2,3,4,5,5½,6	1
Hood Meadow	10D03	6600	22	4S	6E	1935	2,3,4,5,5½	1
Little Park	11D10	7400	22	6S	3E	1963	3,4,5	1
New World	10D01	6700	34	3S	6E	1939	2,3,4	1
Twenty-One Mile	11E06	7150	1	11S	5E	1934	1,2,3,4,5	3
MISSOURI RIVER MAIN STEM								
Boulder Mountain	11C01	7950	1	9N	3E	1963	3,4,5	1
Chessman Reservoir	12C05	6200	2	8N	5W	1936	1,2,3,4,5	3
Elk Peak	10C07	8000	10	8N	8E	1963	3,4,5	1
Grasshopper	10C02	7000	19	9N	8E	1938	3,4,5	1
Kings Hill	10C01	7500	34	13N	8E	1934	3,4,5	3
Rocky Boy	9A01	5200	15	28N	16E	1941	3,4	7
Stemple Pass	12C01	6600	16	13N	7W	1934	3,4,5	3
Ten Mile Lower	12C02	6600	12	8N	6W	1935	1,2,3,4,5	3
Ten Mile Middle	12C03	6800	13	8N	6W	1934	1,2,3,4,5	3
Ten Mile Upper	12C04	8000	19	8N	5W	1935	1,2,3,4,5	3
SUN-TETON-MARIAS RIVERS								
Badger Pass	13A15	6900	4	27N	11W	1964	3,4,5	1
Cabin Creek	12B06	5200	33	23N	10W	1949	3,4,5	1
Five-Bull	12B09	5700	25	20N	10W	1948	3,4,5	1
Freight Creek	12A01	6000	13	18N	10W	1948	3,4,5	1
Goat Mountain	12B07	7000	20	22N	10W	1934	3,4,5	3
Waldren Creek	12B02	5300	16	25N	9W	1948	3,4,5	1
West Fork	12B01	6000	6	25N	9W	1948	3,4,5	1
Wrong Creek	12B04	5700	32	25N	10W	1949	3,4,5	1
Wrong Ridge	12B03	6800	17	25N	10W	1949	3,4,5	1
JUDITH RIVER								
Crystal Lake	9C01	6100	19	12N	18E	1941	3,4	1
Spur Park	10C06	8000	20	12N	9E	1963	3,4,5	1
UPPER YELLOWSTONE RIVER								
Bald Ridge	10C05	7500	11	4N	10E	1961	3,4	1
Camp Senia	9D01	7890	2	8S	18E	1937	3,4,5	1
Crevice Mountain	10D05	8400	22	9S	9E	1935	3,4	2
Grizzly Peak	9D05	8400	26	7S	19E	1961	1,2,3,4,5	1
Independence	10D06	8000	22	7S	12E	1940	3,4,5	1
Monument Peak	10D12	9000	22	7S	12E	1961	3,4,5	1
Northeast Entrance	10D07	7400	33	9S	14E	1937	1,2,3,4,5	6
Porcupine R. S.	10C03	6500	10	4N	10E	1938	3,4	1
Sacajawea	10D10	6550	36	2N	6E	1960	3,4,5	1
Timberline Creek	9D04	8850	10	8S	18E	1961	3,4,5	1
West Rosebud	9D02	7500	9	7S	16E	1960	3,4	4

SOIL MOISTURE STATIONS

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
COLUMBIA RIVER BASIN								
KOOTENAI RIVER								
Baree Trail	15B15M	3800	5	25N	30W	1964	Monthly	2
Murphy Lake R. S.	14A10M	3000	5	34N	25W	1964	Monthly	2
Raven R. S.	15A02M	3050	2	26N	29W	1964	Monthly	2
FLATHEAD RIVER								
Desert Mountain	13A02M	5600	24	31N	19W	1956	Monthly	1
Marias Pass	13A05M	5250	34	30N	14W	1950	Monthly	1
CLARK FORK RIVER								
Georgetown Lake	13C15M	6450	6	5N	13W	1962	Monthly	1
Lubrecht Forest	13C14M	4100	11	13N	15W	1961	Monthly	8
Seeley Lake	13B19M	4030	21	17N	15W	1963	Monthly	2
Skalkaho Summit	13C03M	7260	30	6N	17W	1964	Monthly	1
BITTERROOT RIVER								
Gibbons Pass	13D18M	7100	4	2S	19W	1962	Monthly	1
Lolo Pass	14C05M	5250	11	10N	24W	1963	Monthly	1
MISSOURI RIVER BASIN								
BEAVERHEAD RIVER								
Lakeview	11E13M	6700	23	14S	2W	1962	Monthly	10
MADISON RIVER								
Red Bluff	11D04M	4800	7	3S	1E	1961	Monthly	7
GALLATIN RIVER								
College Site	11D02M	4856	18	2S	5E	1956	Monthly	1
Twenty-One Mile	11E06M	7150	1	11S	5E	1963	Monthly	6
MISSOURI RIVER MAIN STEM								
Stemple Pass	12C01M	6350	16	13N	7W	1963	Monthly	1
Kings Hill	10C01M	7420	34	13N	8E	1963	Monthly	1
YELLOWSTONE RIVER								
Battle Ridge	10D11M	6020	32	2N	7E	1960	Monthly	1
Northeast Entrance	10D07M	7350	33	9S	14E	1962	Monthly	6
Shields River	10C04M	5850	4	4N	10E	1960	Monthly	1

1/ Numerals 1,2,3,4,5,5½,6 refer to January 1, February 1, March 1, April 1, May 1, May 15 and June 1.

2/ Numerals refer to Agency that secures the snow survey as follows:

1. Soil Conservation Service
2. U. S. Forest Service
3. U. S. Geological Survey
4. Montana Power Company
5. U. S. Indian Service
6. National Park Service
7. Montana Experiment Station
8. Montana State Forestry School
9. Dominion Water & Power Bureau
10. Bureau of Sport Fisheries & Wildlife

M - Soil Moisture

SNOW SURVEY DATA

AS OF

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
						LAST YEAR	AVERAGE

ADDITIONS AND CORRECTIONS TO PREVIOUSLY PUBLISHED 1965 DATA

JANUARY 1, 1965

COLUMBIA RIVER BASIN

Flathead River					
14A03	Hell Roaring Divide	5770	12/31	78	22.2
13B13	Holbrook	4530	1/10	24	6.3A
13B02	Spotted Bear Mountain	7000	1/10	33	9.0A
13B11	Twin Creeks	3580	1/10	30	7.8A
Clark Fork River					
13C21	Lubrecht Forest No. 3	5450	12/29	18	3.1
13C22	Lubrecht Forest No. 4	4650	12/29	11	1.8
13C01	Stuart Mountain	7400	1/5	67	20.2

MISSOURI RIVER BASIN

Gallatin River					
11E06	Twenty-One Mile	7150	12/31	67	13.8

FEBRUARY 1, 1965

COLUMBIA RIVER BASIN

Flathead River					
13B11	Twin Creeks	3580	2/12	43	11.6A

MISSOURI RIVER BASIN

Gallatin River					
10D14	Arch Falls	7350	1/30	44	10.7

A - Aerial Observation

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF

NO.	NAME	ELEVATION	SNOW COURSE	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	PAST RECORD	
							LAST YEAR	AVERAGE

ADDITIONS AND CORRECTIONS TO PREVIOUSLY PUBLISHED 1965 DATA

JANUARY 1, 1965

COLUMBIA RIVER BASIN

Flathead River

12A03	Hell Roaring Divide	5770	12/31	78	22.2
13B13	Holbrook	4530	1/10	24	6.3A
13B02	Spotted Bear Mountain	7000	1/10	33	9.0A
13B11	Twin Creeks	3580	1/10	30	7.8A

Clark Fork River

13C21	Lubrecht Forest No. 3	3450	12/29	18	5.1
13D22	Lubrecht Forest No. 4	4450	12/29	33	1.8
13D01	Stuart Mountain	7100	1/5	67	20.2

MISSOURI RIVER BASIN

Dearborn River

11B05	Twenty-One Mile	7150	12/31	67	13.8

FEBRUARY 1, 1965

COLUMBIA RIVER BASIN

Flathead River

13B11	Twin Creeks	3580	2/12	43	11.0A

MISSOURI RIVER BASIN

Dearborn River

10D16	Area Falls	7350	1/30	44	10.7

A - Aerial Observation

NOTE: ALL AVERAGES BASED ON 1946-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF

(inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
						LAST YEAR	AVERAGE
			MARCH 1, 1965				
			COLUMBIA RIVER BASIN				
Kootenai River							
15B15	Baree Trail	3800	3/1	34	12.1		
Flathead River							
14A06	Kishenehn	3890	3/1	39	13.2		
Clark Fork River							
13C04	Intergaard	6450	3/1	33	10.1		
13C05	Southern Cross	6500	3/1	28	7.8		
			MISSOURI RIVER BASIN				
Madison River							
11E21	Potomageton Park	7150	3/16	53	19.0		
11E20	Sentinel Creek	8300	3/16	83	32.2		
Gallatin River							
10D15	Bridger Bowl	7250	3/12	77	29.9		
Sun-Teton-Marias Rivers							
12B07	Goat Mountain	7000	2/28	50	13.4		
Judith River							
9C01	Crystal Lake	6100	3/3	44	13.6		
			APRIL 1, 1965				
			COLUMBIA RIVER BASIN				
Kootenai River							
14A04	Brush Creek	5000	3/30	43	13.9		
14A11	Graves Creek	4300	3/31	61	21.6		
15A01	Red Mountain	6000	4/1	58	22.0		
Flathead River							
13A02	Desert Mountain	5600	3/29	57	21.8		
13A16	Mineral Creek	4000	3/30	73	27.4		
Clark Fork River							
13C04	Intergaard	6450	4/1	34	10.6		
13C05	Southern Cross	6500	4/1	29	9.2		

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	RIVER DRAINAGE	WATER CONTENT

MARCH 31, 1964

COLUMBIA RIVER BASIN

Kootenai River

13815	Baron Trail	7800	3/31	34	12.1

Flathead River

13A06	Kishenehn	3990	3/1	39	13.2

Clark Fork River

13C04	Interguard	6450	3/1	33	10.1
13C05	Southern Cross	6500	3/1	24	7.8

HUNGRY HORSE BASIN

Medicine River

11B21	Potomagelon Park	7150	3/16	53	19.0
11B20	Sentinel Creek	8300	3/16	83	32.2

Gallatin River

10G15	Bridger Bowl	7250	3/12	77	29.9

Sun-Teton-Marias River

12E07	Goat Mountain	7000	3/28	59	13.4

Judith River

9D01	Crystal Lake	6100	3/3	44	13.6

APRIL 1, 1964

COLUMBIA RIVER BASIN

Kootenai River

12A04	Bevah Creek	5900	3/30	45	13.9
12A13	Graves Creek	4300	3/31	61	21.6
13A01	Red Mountain	6000	4/1	78	22.0

Flathead River

13A02	Desert Mountain	5600	3/29	57	21.8
13A15	Mineral Creek	4000	3/30	73	27.4

Clark Fork River

13C04	Interguard	6450	4/1	34	10.6
13C05	Southern Cross	6500	4/1	29	9.2

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
						LAST YEAR	AVERAGE
APRIL 1, 1965 (Continued)							
MISSOURI RIVER BASIN							
Beaverhead River							
13D15	Elk Horn Springs	7800	3/30	49	15.2		
Missouri River (Main Stem)							
12C05	Chessman Reservoir	6200	3/30	24	6.1		
Madison River							
11E25	Freezeout Lake	7200	4/14	39	14.6		
11E26	Freezeout Mountain	8250	4/14	71	24.8		
11E22	Lake Creek	6100	4/14	27	10.3		
11E23	Meridian Creek	7000	4/13	43	15.2		
11E20	Sentinel Creek	8300	4/2	83	31.7		
11E24	Tepee Creek	8000	4/13	68	22.7		
MAY 1, 1965							
COLUMBIA RIVER BASIN							
Kootenai River							
15B11	Baree Creek	5500	4/30	88	46.2		
15B15	Baree Trail	3800	4/30	0	0.0		
Flathead River							
13A11	Beaver Lake	5900	5/2	69	31.8		
13B12	Gunsight Lake	6300	5/3	111	50.8		
13A05	Marias Pass	5250	4/27	62	28.0		
13A16	Mineral Creek	4000	5/1	39	17.5		
13A10	Strawberry Lake	5600	5/3	103	53.3		
MISSOURI RIVER BASIN							
Madison River							
Freezeout Lake		7200	5/4	14	5.2		
Freezeout Mountain		8250	5/4	56	24.4		
Lake Creek		6100	5/7	7	1.3		
Meridian Creek		7000	5/3	25	10.0		
Tepee Creek		8000	5/3	55	21.2		
Gallatin River							
11E06	Twenty-One Mile	7150	4/28	55	24.8		
Sun-Teton-Marias Rivers							
13A15	Badger Pass	6900	5/3	106	49.8		
12B07	Goat Mountain	7000	4/30	42	15.9		

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF

SNOW COURSE		CURRENT DATA			PAST RECORD	
No.	NAME	OBSERVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT
						LAST YEAR / AVERAGE

APRIL 1, 1965 (Continued)

MISSOURI RIVER BASIN

Beaverhead River

13015	Elk Horn Springs	7800	3/30	49	18.2

Missouri River (Main Stem)

12C05	Chessman Reservoir	6500	3/30	24	6.1

Madison River

11K45	Pressent Lake	7200	4/14	39	14.6
11K55	Pressent Mountain	8490	4/14	71	24.8
11K32	Lake Creek	6100	4/14	27	10.3
11M43	Meridian Creek	7000	4/13	43	15.2
11K20	Portal Creek	8300	4/3	83	31.7
11K24	Tepee Creek	8000	4/13	68	22.7

MAY 1, 1965

COLUMBIA RIVER BASIN

Kootenai River

12B13	Burke Creek	5500	4/30	88	46.2
12B15	Burke Trail	3800	4/30	0	0.0

Flathead River

13A11	Beaver Lake	5900	5/2	69	31.8
13B12	Quadgy Lake	6300	5/3	111	50.8
13A05	Marias Pass	5250	4/27	62	24.0
13A16	Mineral Creek	4000	5/1	39	17.5
13A10	Strawberry Lake	5600	5/3	109	53.3

MISSOURI RIVER BASIN

Madison River

Pressent Lake		7200	5/4	14	5.2
Pressent Mountain		8250	5/4	56	24.4
Lake Creek		6100	5/7	7	1.3
Meridian Creek		7000	5/3	25	10.0
Tepee Creek		8000	5/3	55	21.2

Gallatin River

11M06	Twenty-One Mile	7150	4/28	55	22.8

Ruby-Beaverhead Rivers

12A15	Badger Pass	6900	5/3	105	49.8
12B07	Goat Mountain	7000	4/30	42	15.9

NOTE: ALL AVERAGES BASED ON 1958-1962 (15 YEAR PERIOD). "ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 15, 1965

(inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
						LAST YEAR	AVERAGE
COLUMBIA RIVER BASIN							
Kootenai River							
15B11	Baree Creek	5500	5/14	68	36.6	57.5	42.3*
15B15	Baree Trail	3800	5/14	0	0.0	-	-
BC 10	Fernie	3500	5/17	0	0.0	0.0	-
BC 11	Glacier	4100	5/15	34	17.4	25.6	19.3*
14A11	Graves Creek	4300	5/14	24	11.6	-	-
BC 43	Gray Creek	5100	5/16	38	17.5	23.5	17.6*
BC 33	Kicking Horse	5400				8.7	7.8*
BC 32	Marble Canyon	5000	5/15	17	6.1	5.4	8.7*
BC 10B	Morrissey Ridge	6100				-	-
BC 10A	New Fernie	4100	5/17	2	0.9	1.0	-
15A01	Red Mountain	6000	5/13	36	17.0	18.0	18.4*
BC 20A	Sullivan Mine	5100	5/14	9	3.9	8.1	6.8*
14A07	Weasel Divide	5450	5/14	64	34.5	36.4	32.6*
Flathead River							
14A03	Hell Roaring Divide	5770	5/14	58	29.7	42.5	-
13B07	North Fork Jocko	6330	5/14	95	50.4	59.2	-
Clark Fork River							
13C13	Black Pine	7100	5/13	36	15.6	-	-
13C03	Skalkaho Summit	7260	5/13	70	34.2	28.8	23.0*
13C01	Stuart Mountain	7400	5/16	68	34.6	-	-
14B01	TV Mountain	6800	5/15	44	20.9	-	-
Bitterroot River							
13D02	Gibbons Pass	7100	5/14	52	26.9	25.9	20.1*
14C07	Lost Horse	5940	5/13	67	33.0	-	-
13D22	Saddle Mountain	7940	5/14	69	34.4	-	-
14C08	Twin Lakes	6510	5/13	96	48.8	-	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 15, 1965

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	DEPTH OF SNOW	WATER CONTENT	WATER CONTENT	% OF 1964

COLUMBIA RIVER BASIN

Kootenai River

15B11	Bears Creek	7500	5/14	64	36.6	27.5	42.3*
15B15	Berry Trail	7900	5/14	0	0.0	-	-
BC 10	Fernie	5900	5/17	0	0.0	0.0	-
BC 11	Glacier	4100	5/15	34	17.4	25.6	19.3*
14A11	Grave Creek	4700	5/14	24	11.6	-	-
BC 43	Gray Creek	5100	5/16	38	17.5	23.5	17.6*
BC 13	Kicking Horse	5400				8.7	7.3*
BC 32	Marble Canyon	5000	5/15	17	6.1	5.4	8.7*
BC 108	Morrissey Ridge	6100				-	-
BC 10A	New Fernie	4200	5/17	2	0.9	1.0	-
15A01	Red Mountain	6500	5/13	34	17.0	18.0	13.4*
BC 20A	Sullivan Mine	5100	5/14	9	3.9	6.1	6.5*
14A07	Wasa Creek	5400	5/14	61	34.5	26.4	32.6*

Flathead River

12A03	Hell Roaring Divide	5700	5/14	58	29.7	42.5	-
12B07	North Fork Jocko	6130	5/14	95	50.4	59.2	-

Clark Fork River

13D13	Black Pine	7100	5/13	36	15.6	-	-
13C03	Skalkaho Summit	7360	5/13	70	34.2	28.8	23.0*
13D01	Stuart Mountain	7400	5/16	64	31.6	-	-
12B08	TV Mountain	6810	5/15	44	20.9	-	-

Blackfoot River

11D02	Gibbons Pass	7100	5/14	52	26.3	25.9	20.1*
11A07	Lost Horse	5400	5/13	67	33.0	-	-
11D02	Saddle Mountain	7400	5/14	69	34.4	-	-
11C08	Twin Lakes	6910	5/13	96	46.8	-	-

NOTE: ALL MATERIALS SHOWN ON 1949-1963 (15 YEAR PERIOD). "ADJUSTED AVERAGE"

SNOW SURVEY DATA

AS OF MAY 15, 1965

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
	MISSOURI RIVER BASIN						
Madison River							
11E25	Freezeout Lake	7200	5/17	0	0.0	-	-
11E26	Freezeout Mountain	8250	5/17	43	20.6	-	-
11E22	Lake Creek	6100	5/17	0	0.0	-	-
11E23	Meridian Creek	7000	5/17	0	0.0	-	-
11E24	Tepee Creek	8000	5/17	46	19.4	-	-
Gallatin River							
10D14	Arch Falls	7350	5/15	46	19.0	-	-
10D15	Bridger Bowl	7250	5/14	68	32.6	-	-
10D04	Devil's Slide	8100	5/15	80	35.0	-	-
10D03	Hood Meadow	6600	5/15	25	10.0	-	-
Missouri River (Main Stem)							
10C01	Kings Hill	7500	5/13	54	21.6	-	-
Judith River							
10C06	Spur Park	8000	5/13	71	31.0	-	-
Upper Yellowstone River							
9D01	Camp Senia	7890	5/14	41	14.6	-	-
9D04	Timberline Creek	8850	5/14	75	29.0	-	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 15, 1965

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT LAST YEAR	AVERAGE

MISSOURI RIVER BASIN

Madison River

11E24	Freemont Lake	7200	5/17	0	0.0	-	-
11E16	Freemont Mountain	9270	5/17	42	20.6	-	-
11E22	Lake Creek	6100	5/17	0	0.0	-	-
11E23	Meridian Creek	7700	5/17	0	0.0	-	-
11E24	Tepee Creek	8000	5/17	46	19.4	-	-

Gallatin River

10D14	Arch Peaks	7340	5/13	46	19.0	-	-
10D15	Bridger Bowl	7250	5/14	66	32.6	-	-
10D04	Devil's Slide	6700	5/15	80	35.0	-	-
10D07	Hood Meadow	6500	5/13	25	10.0	-	-

Missouri River (Main Stem)

10C01	Kings Hill	7900	5/13	54	21.0	-	-

Judith River

10C06	Open Park	8000	5/13	72	31.0	-	-

Upper Yellowstone River

9D01	Deep Basin	7890	5/14	41	17.0	-	-
9D04	Timber Line Creek	8830	5/14	75	29.0	-	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF JUNE 1, 1965

(Inches)

SNOW COURSE NO.	SNOW COURSE NAME	ELEVATION	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SNOW DEPTH	CURRENT DATA: WATER CONTENT	PAST RECORD: WATER CONTENT: LAST YEAR	PAST RECORD: WATER CONTENT: AVERAGE
	COLUMBIA RIVER BASIN						
	Kootenai River						
BC 11	Glacier	4100	5/30	25	11.5	15.7	8.4*
14A11	Graves Creek	4300	6/1	2	0.8	-	-
BC 43	Gray Creek	5100	5/29	23	11.2	17.3	9.5*
BC 33	Kicking Horse	5400	5/31	5	1.5	3.0	-
15A01	Red Mountain	6000	6/2	15	7.4	2.4	6.6*
14A07	Weasel Divide	5450	6/1	42	23.6	21.8	-
	Flathead River						
13B03	Big Creek	6750	6/1	83	49.4	48.4	42.5*
13A02	Desert Mountain	5600	5/28	1	0.7	1.5	-
13B04	Fatty Creek	5500	6/1	11	5.8	11.8	-
14A03	Hell Roaring Divide	5770	6/2	28	16.0	28.2	-
13B07	North Fork Jocko	6330	6/2	62	33.9	41.8	30.3*
	Clark Fork River						
13C13	Black Pine	7100	5/27	24	11.0	-	-
			6/1	12	5.0	-	-
13C03	Skalkaho Summit	7260	6/1	44	24.0	19.6	14.1*
13C01	Stuart Mountain	7400	5/29	53	30.5	-	20.4*
	Bitterroot River						
13D02	Gibbons Pass	7100	6/2	26	14.6	11.4	6.7*
14C07	Lost Horse	5940	6/1	43	21.9	-	-
13D22	Saddle Mountain	7940	6/2	50	26.4	-	-
14C08	Twin Lakes	6510	6/1	68	37.3	-	-
	MISSOURI RIVER BASIN						
	Madison River						
11E25	Freezeout Lake	7200	6/1	0	0.0	-	-
11E26	Freezeout Mountain	8250	6/1	29	14.5	-	-
11E22	Lake Creek	6100	6/1	0	0.0	-	-
11E23	Meridian Creek	7000	6/1	0	0.0	-	-
11E24	Tepee Creek	8000	6/1	32	14.1	-	-
	Gallatin River						
10D14	Arch Falls	7350	5/30	38	17.0	10.0	-
10D15	Bridger Bowl	7250	5/31	54	28.0	-	-
10D04	Devil's Slide	8100	5/30	75	35.2	25.9	-
10D03	Hood Meadow	6600	5/30	11	4.4	0.0	-
	Missouri River Main Stem						
10C01	Kings Hill	7500	6/1	41	18.8	-	-
	Judith River						
10C06	Spur Park	8000	6/1	60	27.8	-	-
	Upper Yellowstone River						
9D01	Camp Senia	7890	5/28	34	14.7	-	-
9D04	Timberline Creek	8850	5/28	64	28.8	-	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	NO. OF COURSES	WATER CONTENT	WATER CONTENT	
						LAST YEAR	AVERAGE

SOIL MOISTURE DATA

AS OF

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE

ADDITIONS AND CORRECTIONS TO PREVIOUSLY PUBLISHED 1965 DATA

COLUMBIA RIVER BASIN

Kootenai						
15B15M	Baree Trail	3800	48	7.5	4/30	6.7
14A10M	Murphy Lake R.S.	3000	48	22.6	3/1	21.7
15A02M	Raven R.S.	3050	48	23.0	1/4	21.5
					2/2	22.0
Flathead						
13A02M	Desert Mountain	5600	54	8.4	10/2	5.6
					1/4	7.1
					3/29	7.6
13A05M	Marias Pass	5250	54	6.5	1/29	5.5
13B19M	Seeley Lake R.S.	4030	48	10.6	12/30	6.9
Bitterroot						
13D18M	Gibbons Pass	7100	48	7.1	4/30	7.2

MISSOURI RIVER BASIN

Beaverhead						
11E13M	Lakeview	6700	48	15.3	12/3	6.2
					1/8	11.2
					2/1	11.2
					3/3	13.6
					4/1	13.4
Missouri Main Stem						
10C01M	Kings Hill	7420	48	11.8	12/30	7.8
12C08M	Stemple Pass	6350	48	5.9	4/24	5.4
Yellowstone						
10D11M	Battle Ridge	6020	48	15.4	9/1	10.8
					10/2	10.4
					11/5	11.6
					12/1	12.9
					12/31	14.6

**AVERAGE FOR PERIOD OF RECORD

SOIL MOISTURE DATA

AS OF

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE

ADDITIONS AND CORRECTIONS TO PREVIOUSLY PUBLISHED 1965 DATA

COLUMBIA RIVER BASIN

Kootenai

1581M	Eureka Trail	3900	4S	7.5	4/30	8.7
1242M	Murphy Lake R.S.	3000	4E	22.6	3/1	21.7
1540M	Heven R.S.	3050	4S	23.0	1/4	21.5
					2/2	22.0

Flathead

1340M	Desert Mountain	3000	5E	8.4	10/2	5.6
					1/4	7.1
					3/29	7.6
1340M	Morias Pass	5250	5E	6.5	1/29	5.5
1380M	Seeley Lake R.S.	4030	4S	10.6	12/30	6.9

Bitterroot

1320M	Gibbons Pass	7100	4S	7.1	4/30	7.2

MISSOURI RIVER BASIN

Beaverhead

1181M	Lakeview	6700	4S	15.3	12/3	6.2
					1/8	11.2
					2/1	12.2
					3/3	13.6
					4/1	13.4

Missouri Main Stem

1000M	Ringe Hill	7420	4S	11.8	12/30	7.8
1200M	Steeple Pass	6950	4S	5.9	4/24	5.4

Yellowstone

1001M	Bottle Ridge	6020	4S	15.4	9/1	10.9
					10/2	10.4
					11/5	12.6
					12/3	12.9
					12/31	14.6

**AVERAGE FOR PERIOD OF RECORD

SOIL MOISTURE DATA

AS OF JUNE 1, 1965

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
			COLUMBIA RIVER BASIN					
Kootenai								
15B15M	Baree Trail	3800	48	7.5			-	-
14A10M	Murphy Lake R.S.	3000	48	22.6	6/2	22.1	-	-
15A02M	Raven R.S.	3050	48	23.0			-	-
Flathead								
13A02M	Desert Mountain	5600	54	8.4			8.9	8.7
13A05M	Marias Pass	5250	54	6.5	5/31	6.1	6.1	5.8
Clark Fork								
13C15M	Georgetown Lake	6450	48	9.0*	6/1	8.0	7.8	-
13B19M	Seeley Lake	4030	48	11.9*	6/3	10.8	10.6	-
13C02M	Skalkaho Summit	7260	48	10.8	6/1	10.2	-	-
Bitterroot								
13D18M	Gibbons Pass	7100	48	7.1	6/2	7.0	7.2	-
14C05M	Lolo Pass	5250	48	10.6*	6/1	10.1	10.2	-
			MISSOURI RIVER BASIN					
Beaverhead								
11E13M	Lakeview	6700	48	15.3	6/1	15.7	15.0	-
Madison								
10D04M	Red Bluff	4800	40	4.7	5/29	2.4	3.5	-
Gallatin								
11D02M	College Site	4856	54	14.5	5/28	13.7	10.4	10.9
11E06M	Twenty-One Mile	7150	48	8.8	5/28	9.9	10.1	-
Missouri Main Stem								
10C01M	Kings Hill	7420	48	11.8	6/1	10.0	10.4	-
12C08M	Stemple Pass	6350	48	5.9	6/2	5.2	5.1	-
Yellowstone								
10D11M	Battle Ridge	6020	48	17.6*	6/1	15.8	13.9	-
10D07M	Northeast Entrance	7350	48	9.4	5/31	8.6	9.6	

**AVERAGE FOR PERIOD OF RECORD *Revised

SOIL MOISTURE DATA

AS OF JUNE 1, 1965

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
No.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
	COLUMBIA RIVER BASIN							
	Kootenai							
15B15M	Bonne Trail	3800	48	7.5			-	-
14A10M	Murphy Lake R.S.	3000	48	22.6	6/2	22.1	-	-
15A02M	Raven R.S.	3650	48	23.0			-	-
	Flathead							
13A03M	Desert Mountain	5600	54	8.4			3.9	8.7
13A05M	Merlin Pass	5250	52	6.5	5/31	6.1	6.1	5.8
	Clark Fork							
12C15M	Canyonlown Lake	6430	42	9.0*	6/1	8.0	7.8	-
13B19M	Seeley Lake	4030	48	11.9*	6/3	10.8	10.6	-
13C02M	Sheilabo Summit	7260	48	10.8	6/1	10.2	-	-
	Blackfoot							
13D15M	Gibbons Pass	7100	48	7.1	6/2	7.0	7.2	-
14C05M	Lolo Pass	5250	42	10.6*	6/1	10.1	10.2	-
	MISSOURI RIVER BASIN							
	Beaverhead							
11B13M	Lakeview	6700	48	13.3	6/1	13.7	13.0	-
	Madison							
10D04M	Red Bluff	4800	40	4.7	5/29	2.4	3.5	-
	Gallatin							
11D02M	College Site	4850	54	14.5	5/28	13.7	10.4	10.9
11E05M	Swasty-Ono Mile	7150	48	8.8	5/28	9.9	10.1	-
	Missouri Main Stem							
10C01M	Ridge Mill	7420	48	11.8	6/1	10.0	10.4	-
12C08M	Shanple Pass	6350	48	3.0	6/2	5.2	5.1	-
	Yellowstone							
10D11M	Battle Ridge	6020	48	17.6*	6/1	15.8	13.9	-
10D07M	Northeast Antenna	7350	48	9.4	5/31	8.6	9.6	

**AVERAGE FOR PERIOD OF RECORD *Revised

RESERVOIR STORAGE DATA

AS OF MAY 31, 1965

(1000 Acre Feet)

BASIN	RESERVOIR	USEABLE CAPACITY	USEABLE STORAGE THIS YEAR	USEABLE STORAGE LAST YEAR	USEABLE STORAGE AVERAGE
COLUMBIA RIVER BASIN					
Flathead	Hungry Horse	3,428.0	2,245.0	2,547.0	2,793.6**
	Flathead Lake	1,791.0	1,457.0	1,556.0	1,559.2
	Camas 1/	45.2	35.0	25.1	41.7
	Mission Valley 2/	100.3	58.3	43.6	68.8
Clark Fork	Georgetown Lake	31.0	25.3	28.2	24.0
	Noxon Rapids	334.6	192.2	161.7	-
Bitterroot	Como	34.9	28.7	18.1	29.0
	Painted Rocks	31.7		-	32.4
MISSOURI RIVER BASIN					
Beaverhead	Clark Canyon	255.6	147.3	-	-
	Lima	84.0	77.9	53.7	58.1
Ruby	Ruby	38.8		-	35.4**
Madison	Hebgen Lake	384.8	262.3	298.0	270.5
	Ennis Lake	41.0	24.5	38.2	35.6
Gallatin	Middle Creek	8.0	5.1	7.2	6.4**
Missouri	Canyon Ferry	2,043.0	1,603.0	1,851.0	1,756.8**
	Hauser & Helena	61.9	46.5	64.2	53.4
	Lake Helena	10.4	4.3	11.3	7.6
	Holter Lake	81.9	70.8	78.1	72.8
	Smith River	10.7	11.6	11.4	8.8**
	Ackley Lake	5.8		-	4.4
	Durand	7.0	7.0	7.0	6.5
	Martinsdale	23.1	20.5	13.6	15.0
	Deadman's Basin	72.2	70.2	64.2	46.8**
	Fort Peck	19,410.0	16,880.0	12,780.0	11,651.7
Sun	Gibson	105.0	94.4	93.1	94.4
	Willow Creek	32.3	25.2	25.2	28.5
	Pishkun	32.0	30.9	31.4	27.0
Marias	Lower Two Medicine	16.6	-	15.0	8.7
	Four Horns	19.2		-	11.7
	Swift	30.0	-	21.6	29.6
	Lake Frances	112.0	97.5	77.6	104.4
	Tiber	1,313.0	979.2	750.2	729.4**
Milk	Fresno	127.2	119.9	98.2	107.1
	Nelson	66.8	55.5	27.2	40.7
	Lake Sherburne	66.1	34.4	16.7	35.2
Yellowstone	Mystic Lake	20.8	1.9	3.6	6.3
	Tongue River	68.0	26.9	-	29.3
	Cooney	27.5	15.2	19.8	17.9**

1/ Sum of four small reservoirs on west side of Flathead Lake.
2/ Sum of eight small reservoirs in Mission Valley not including Jocko Lake.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). **AVERAGE FOR PERIOD OF RECORD

RESERVOIR STORAGE DATA

AS OF MAY 31, 1965

(1000 Acre Feet)

BASIN	RESERVOIR	USEABLE CAPACITY	USEABLE STORAGE THIS YEAR	USEABLE STORAGE LAST YEAR	USEABLE STORAGE AVERAGE
COLUMBIA RIVER BASIN					
Flathead	Hungry Horse	3,428.0	2,245.0	2,547.0	2,793.6**
	Flathead Lake	1,791.0	1,457.0	1,356.0	1,559.2
	Canas 1/	45.2	35.0	29.1	41.7
	Mission Valley 2/	100.3	58.3	43.6	68.3
Clark Fork	Georgetown Lake	31.0	25.3	28.2	24.0
	Noxon Rapids	334.6	192.2	161.7	-
Bitterroot	Como	34.9	28.7	18.1	29.0
	Painted Rocks	31.7	-	-	32.4
MISSOURI RIVER BASIN					
Beaverhead	Clark Canyon	295.6	147.3	-	-
	Lima	84.0	77.9	53.7	58.1
Ruby	Ruby	38.8	-	-	35.4**
Madison	Hebgen Lake	384.8	262.3	298.0	270.5
	Ennis Lake	41.0	24.5	38.6	35.6
Gallatin	Middle Creek	8.0	5.1	7.2	6.4**
Missouri	Canyon Ferry	2,042.0	1,503.0	1,851.0	1,756.8**
	Hauser & Holmes	61.9	45.5	64.2	53.4
	Lake Helena	10.4	4.3	11.3	7.6
	Holter Lake	81.9	70.8	78.1	72.8
	Smith River	10.7	11.0	11.4	8.8**
	Ackley Lake	5.8	-	-	4.4
	Durand	7.0	7.0	7.0	6.5
	Martinsdale	23.1	20.5	13.6	15.0
	Deadman's Basin	72.2	70.2	64.2	46.8**
	Fort Peck	19,420.0	16,880.0	12,760.0	11,691.7
Sun	Gibson	109.0	94.4	93.1	94.4
	Willow Creek	32.3	25.2	25.2	28.5
	Pishkun	32.0	30.9	31.4	27.0
Marias	Lower Two Medicine	16.6	-	15.0	8.7
	Four Horns	19.2	-	-	11.7
	Swift	30.0	-	21.6	29.6
	Lake Frances	112.0	97.5	77.6	104.4
	Tiber	1,313.0	979.2	750.2	729.4**
Milk	Fresno	127.2	119.9	98.2	107.1
	Nelson	66.8	55.5	27.2	40.7
	Lake Sherburne	96.1	34.4	16.7	35.2
Yellowstone	Pryatis Lake	20.8	1.9	3.6	6.3
	Tongue River	68.0	26.9	-	20.3
	Cooney	27.5	15.2	19.8	17.9**

1/ Dam of four small reservoirs on west side of Flathead Lake.
2/ Dam of eight small reservoirs in Mission Valley not including Jocko Lake.

NOTE: ALL AVERAGES BASED ON 1946-1962 (17 YEAR PERIOD). **AVERAGE FOR PERIOD OF RECORD

Agencies Cooperating in Collecting Data Contained in this Bulletin

U. S. Forest Service
Region 1, Missoula, Montana

U. S. Geological Survey
Helena, Montana

U. S. Army Corps of Engineers
Portland, Oregon
Seattle, Washington
Omaha, Nebraska

U. S. Indian Irrigation Service
St. Ignatius, Montana

U. S. Weather Bureau
Helena, Montana

U. S. Bureau of Sports Fisheries and Wildlife
Red Rock Lakes Refuge
Monida, Montana

U. S. Bureau of Reclamation
Billings, Montana
Boise, Idaho

Montana Power Company
Butte, Montana

Agricultural Experiment Station
North Montana Branch Station
Havre, Montana

State Water Conservation Board
Helena, Montana

National Park Service
Yellowstone National Park
Glacier National Park

Montana Experiment Station
Montana State College
Bozeman, Montana

Bonneville Power Administration
Portland, Oregon

Montana State University
School of Forestry
Missoula, Montana

Soil Conservation Service
Montana, Wyoming, Idaho

Soil and Water Conservation Districts
Montana Counties

Johnson Flying Service, Inc.
Missoula, Montana

Water Rights Branch, Dept. of Lands and Forests
Victoria, British Columbia

Department of Northern Affairs and National Resources
Calgary, Alberta

State Engineer
Helena, Montana

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SOIL CONSERVATION SERVICE
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